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ICF TECHNOLOGY INCORPORATED

MEMORANDUM

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TO: David Wineman, Region VI, RPO

THRU: K.H. Malone, Jr., FITOM

THRU: Tim Hall, ICF-AFITOM

FROM: Ravinder Joseph, FIT Engineer

DATE: October 26, 1988

9831260

SUBJECT: Updated Preliminary HRS package for the Air Center Site located in Oklahoma City, OK.
TDD# F-6-8808-35
CERCLIS# OKD980750319
PAN# FOK0270HBA

An updated preliminary HRS package has been completed for Air Center Inc., located at 7300 NW 63rd Street, Oklahoma City, OK 73131. The latitude and longitude for the site are 35° 32′ 17" N and 97° 38′ 30" W. The site is located on the Wiley Post Airport property which is a municipal airport used by private aircraft. The site was active from September 1973 to approximately March 1984, when Air Center declared bankruptcy. The site was used as an aircraft stripping and painting facility. Solvents, including the chlorinated hydrocarbon methylene chloride, chromic acid, caustics and phenols were used in the stripping process (Ref. 2, p. 11; Ref. 9, p. 2; Ref. 24). Currently, the site has been leased from the Wiley Post authorities to Commander Aircraft, owned by Gulfstream Aerospace Corporation. The buildings at the site are being used as paint hangers. Also, according to Wiley Post authorities, Commander Aircraft has been asked not to use any 'corrosive' paints and to discharge wastewater only to Oklahoma City's sanitary sewers after obtaining a permit from the city.

Air Center generated wastewater from the paint stripping process and this was stored in two 500-gallon underground storage tanks on-site (Ref. 12, p. 1, p. 18). However, it was noticed during inspections by the Oklahoma Water Resources Board on July 2, 1984, and August 14, 1984, that wastewater from the stripping operations was being discharged directly (via a concrete pipe) into the drainage ditch on-site (Ref. 12, p. 18). Paint strippers were also poured directly into an unlined lagoon on-site (Ref. 9, p. 3; Ref. 7, p. 7). The lagoon may be seen in an aerial photograph of the site taken in 1979 (Ref. 23). The lagoon was later filled with soil and the wastewater was discharged to the drainage ditch (Ref. 9, p. 3; Ref. 7, p. 7).

Reviewed by 6H-ES
Date 1/23/89

PRELIMINARY REPORT
This does not constitute
final opinion of EPA

The drainage ditch at the site feeds ponds on-site and then drains via a culvert under Rockwell Avenue to Woodlake Pond (Ref. 2, p. 11). Woodlake Pond is used for recreational fishing and boating.

Analysis of sediment samples taken on-site by the Oklahoma Water Resources Board in September 1983, found cyanide, chromium, phenol and zinc at higher concentrations than the background sediment sample collected along the drainage ditch on-site (Ref. 12, p. 12 to p. 15). Chromium, zinc, and lead were found in concentrations exceeding background levels in sediment samples taken from the drainage ditch on-site and in Woodlake Pond by the Oklahoma State Department of Health (OSDH) in September 1986 (Ref. 2, p. 25 to p. 34). Sampling conducted by OSDH in April 1987 found a high concentration of chromium close to the concrete drainage pipe on-site (Ref. 18, p. 1).

During the week of January 4, 1988, FIT collected samples from the underground storage tanks. Soil/sediment and water samples were also taken from the approximate location of the former lagoon, along the drainage ditch, and off-site from Woodlake Pond. Phenols and cyanide were detected in water from the underground storage tanks. Soil on-site at the mouth of the concrete drainage pipe contained phenol. The inlet to the swampy pond was found to contain elevated levels of cyanide. Cyanide was not detected in background samples. Phenol was not detected on-site in background soil samples, but was detected in the off-site background soil sample at Woodlake Pond. This presence in the off-site background could be due to flooding conditions and the possible overflowing of Woodlake Pond.

The groundwater route has been scored for an observed release with lead and chromium. Groundwater flow in the general vicinity of the site is toward the southwest. The lead contamination in municipal well #23 may be attributed to the Wiley Post Airport and to Air Center, which are located 1-2 miles to the east of this well. The City of Bethany, with a population of 26,000, is on groundwater from shallow and deep wells located in the Alluvium and Garber-Wellington Aquifers. There are 27 active City of Bethany municipal wells (Ref. 24). In addition, the residents in Woodlawn located 2-3 miles to the southwest of the site, use groundwater for drinking purposes. The contaminants detected at Air Center can be commonly associated with painting and paint stripping operations. Paint strippers usually contain phenols. Zinc and chromium may have come from zinc chromate which is used as priming coats for steel and aluminum. Zinc chromate is yellow in color and a yellow colored discharge from the concrete pipe was observed on-site in 1984 (Ref. 12, p. 18). Cyanide from plating baths and chromic acid may also have been used at Air Center. The lead may have come from waste jet fuel and from stripped paints.

The on-site surface water route goes from the concrete drainage pipe to a drainage ditch where it enters two ponds and a swampy area. From the swampy area, the surface runoff enters a culvert under Rockwell Avenue and flows off-site into Woodlake Pond (Ref. 19, p. 5). The surface water route has been scored for an observed release

of phenol and cyanide. The surface water route continues for 3 stream miles from Woodlake Pond, the farthest point of contamination for phenol, via two ponds to Silver Lake, located to the north of Wilshire Blvd (Ref. 20; 23; 4). Silver Lake and Ski Island Lake are used for fishing, boating and swimming. There are no surface water intakes within 3 stream miles of Woodlake Pond and no irrigation was noticed by FIT during site recon on 7/23/87 (Ref. 20).

Analysis of a drinking water well sampled by FIT in January 1988, revealed elevated levels of chromium. The chromium was detected in City of Bethany Municipal well #21 located 1 to 2 miles southwest of the site and downgradient from it. Lead at elevated levels were detected in the City of Bethany municipal well #21 and well #23. Well #23 is located about 3000' west of the site. In August 1988, samples of two City of Bethany wells, well # 21 and well # 23, were re-collected and analyzed for lead (Ref. 30). Analysis indicated 7.6 ppb of lead in well # 21, which is well below the Primary Drinking Water Standard of 50 ppb, but is above background levels of zero. lead was not detected in well # 23 at levels above the detection limit. Although the August 1988 sampling indicates that lead may no longer be present at elevated levels, lead is still used as an observed release to groundwater due to its presence in the January, 1988 sampling. The lead contamination in well #21 may be attributed to Air Center, Gulfstream Aerospace Corporation and the underground storage fuel tanks at Wiley Post Airport. All these facilities were located upgradient of this well.

It is recommended that two other sites close to Air Center be investigated. They may be contributing to the groundwater contamination. The sites are Gulfstream Aerospace Corporation located at 5001 North Rockwell, Bethany, OK 73008, and Wiley Post Airport located at 5700 North Rockwell, Oklahoma City, OK 73127. Air Center is located within the property boundary of Wiley Post Airport, Gulfstream Aerospace Corporation is approximately 1.2 miles to the south of the site. A brief description of each site is outlined below.

Gulfstream is a manufacturer of aircraft parts. It is a generator of chromic acid, jet fuel and dried paint waste containing zinc chromate and solvents (Ref. 27). Lead contaminated foundry sand was found dumped on-site during sampling by OSDH in May 1986 (Ref. 28, p. 4). Spills of chromic acid and hydrofluoric acid were also reported in May 1986 (Ref. 28, p. 4). This sampling detected lead as high as 4,850 ppm and chromium as high as 1,281 ppm in soil samples (Ref. 28, p. 6 & 7). In addition, there are seven underground storage tanks at Gulfstream containing unleaded gas, diesel and jet fuel (Ref. 26). The tanks have a combined total capacity of 48,000 gallons. The tanks are between 15 and 26 years old (Ref. 26). It is not known if any of these tanks have been leak tested. Only recently the Oklahoma Corporation Commissions UST Department required test results to be submitted as part of the reporting requirement for underground storage tanks. It is possible that Gulfstream may be contributing to the lead and chromium contamination of groundwater.

Wiley Post Airport has a total of 17 underground storage tanks on-site for storing jet fuel (Ref. 25). The total combined capacities of these tanks is estimated to be 228,000 gallons. The tanks are between 2 and 28 years old (Ref. 25). It is not known whether any of these tanks have been leak tested. It is possible that Wiley Post Airport may also be contributing to the lead contamination of groundwater.

It is recommended that both Gulfstream Aerospace Corporation and Wiley Post Airport, which are upgradient of the City of Bethany wells, be investigated. In order to define the plume and source of groundwater contamination more accurately, it is recommended that those City of Bethany wells located nearest to Air Center be sampled. Furthermore, additional sampling of the on-site drainage ditch would assist in determining the extent of surface contamination.